

1 Claims

- 2 1. A selective one-way wrench comprising:
- 3 a handle;
- 4 an annular head from which the handle projects, the annular head
- 5 defining a first space and a second space communicated with the
- 6 first space;
- 7 a gear rotationally put in the first space, the gear including a
- 8 toothed external face;
- 9 a direction controller put in the second space, the direction
- 10 controller including two pawls and a spring installed between the
- 11 pawls, each of the pawls including a toothed face; and
- 12 a direction switch including a first element installed rotationally on
- 13 the handle and a second element put in the second space and
- 14 operably connected with the first element for bringing the toothed
- 15 face of selective one of the pawls into engagement with the toothed
- 16 external face of the annular gear.
- 17 2. The selective one-way wrench according to claim 1 wherein the
- 18 first space is a circular space.
- 19 3. The selective one-way wrench according to claim 1 wherein the
- 20 second space is a crescent space.
- 21 4. The selective one-way wrench according to claim 1 further
- 22 including a spring-biased detent, wherein the handle defines a
- 23 recess for receiving the spring-biased detent, and the first element
- 24 of the direction switch includes a handle defining two recesses
- 25 selective one of which receives the spring-biased detent so that the
- 26 handle is retained in selective one of two positions.

- 1     5.     The selective one-way wrench according to claim 1 wherein the  
2           first element includes a cylinder extending from a bottom thereof,  
3           and the second element includes a rod extending from a top thereof,  
4           and the cylinder of the first element receives the rod of the second  
5           element.
- 6     6.     The selective one-way wrench according to claim 5 wherein the  
7           first element includes a slot communicated with the hole of the  
8           cylinder, and the second element includes a ridge extending from  
9           the rod, and the slot of the first element receives the ridge of the  
10          second element.
- 11    7.     The selective one-way wrench according to claim 5 wherein the  
12          direction switch includes a pin forced into the rod of the second  
13          element through the cylinder of the first element.
- 14    8.     The selective one-way wrench according to claim 1 wherein each of  
15          the pawls includes a rod, and the second element of the direction  
16          switch includes two hooks selective one of which hooks the rod of  
17          selective one of the pawls.
- 18    9.     The selective one-way wrench according to claim 8 wherein the  
19          second element of the direction switch further includes a  
20          reinforcement plate with a bottom on which the hooks are formed.
- 21    10.    The selective one-way wrench according to claim 5 wherein the  
22          second element includes a reinforcement plate and a rod extending  
23          from the reinforcement plate.
- 24    11.    The selective one-way wrench according to claim 1 wherein each of  
25          the pawls includes a boss fit in the spring.
- 26    12.    The selective one-way wrench according to claim 1 including an

- 1 O-ring fit in the first space in order to support the annular gear.
- 2 13. The selective one-way wrench according to claim 1 including a  
3 C-ring, wherein the annular head defines an annual groove in an  
4 internal side for receiving an external edge of the C-ring, and the  
5 O-ring defines an annular groove in an external side for receiving  
6 an internal edge of the C-ring.
- 7 14. The selective one-way wrench according to claim 1 wherein the  
8 gear is an annular gear.
- 9 15. The selective one-way wrench according to claim 1 wherein the  
10 gear includes an insert for insertion in a socket and a detent attached  
11 to the insert for retaining the socket on the insert.
- 12 16. The selective one-way wrench according to claim 15 wherein the  
13 detent is switched between an extended position for retaining the  
14 socket and a withdrawn position for releasing the socket.
- 15 17. The selective one-way wrench according to claim 16 including a  
16 control device for controlling the switching of the detent between  
17 the extended position and the withdrawn position.
- 18 18. The selective one-way wrench according to claim 17 wherein the  
19 control device includes:  
20 an aperture defined in the insert for trapping the detent;  
21 a space defined in the insert and communicated with the aperture;  
22 and  
23 a rod movable in the space for pushing the detent to the extended  
24 position.
- 25 19. The selective one-way wrench according to claim 18 wherein the  
26 rod includes a hole for receiving the detent in the withdrawn

1 position.

2 20. The selective one-way wrench according to claim 19 wherein the  
3 control device includes a spring compressed between a portion of  
4 the rod and a portion of the gear.

5

6